WHAT IS CLAIMED IS:

- 1. A chimeric molecule comprising an angiogenic factor linked to a targeting molecule that specifically binds to a vascular endothelium.
 - 1 2. The chimeric molecule of claim 1, wherein the angiogenic factor 2 specifically binds to at least one of VEGF-R1, VEGF-R2, or VEGF-R3.
- The chimeric molecule of claim 1, wherein the targeting molecule is a peptide.
 - 1 4. The chimeric molecule of claim 1, wherein the angiogenic factor is
 - 2 vascular endothelial growth factor A (VEGF-A), vascular endothelial growth factor A₁₂₁
 - 3 (VEGF- A_{121}), vascular endothelial growth factor A_{145} (VEGF- A_{145}), vascular endothelial
 - 4 growth factor A_{165} (VEGF- A_{165}), vascular endothelial growth factor A_{189} (VEGF- A_{189}),
 - 5 vascular endothelial growth factor A₂₀₆ (VEGF- A₂₀₆), vascular endothelial growth factor
 - 6 B (VEGF-B), vascular endothelial growth factor B₁₆₇ (VEGF-B₁₆₇), vascular endothelial
 - 7 growth factor B₁₈₆ (VEGF-B₁₈₆), vascular endothelial growth factor C (VEGF-C),
 - 8 vascular endothelial growth factor D (VEGF-D), vascular endothelial growth factor E
 - 9 (VEGF-E), placental growth factor (PIGF), acidic fibroblast growth factor (aFGF), basic
 - fibroblast growth factor (bFGF), or angiopoietin-1 (Ang1).
 - The chimeric molecule of claim 1, wherein the angiogenic factor is
 - 2 Ang2, endostatin or angiostatin.
- 6. The chimeric molecule of claim 1 that is a fusion protein, wherein the fusion protein comprises an angiogenic factor linked to a targeting molecule that specifically binds to a vascular endothelium.
 - The fusion protein of claim 6, wherein the angiogenic factor is
 - 2 VEGF-B, vascular endothelial growth factor B₁₆₇ (VEGF- B₁₆₇), vascular endothelial
 - 3 growth factor B_{186} (VEGF- B_{186}), or vascular endothelial growth factor C (VEGF-C).
 - 1 1/5. A method of increasing cardiac neovascularization comprising
 - 2 contacting endothelial cells of the cardiac vasculature with a chimeric molecule wherein
 - 3 the chimeric molecule comprises an angiogenic factor linked to a targeting molecule that
 - 4 specifically binds to a vascular endothelium.

1	The method of claim 15, wherein the angiogenic factor specifically
2	binds to at least one of VEGF-R1, VEGF-R2, or VEGF-R3.
1	The chimeric molecule of claim 15, wherein the targeting molecule
2	is a peptide.
1	18. The method of claim 15, wherein the angiogenic is vascular growth
2	factor A (VEGF-A), vascular endothelial growth factor A_{121} (VEGF- A_{121}), vascular
3	endothelial growth factor A ₁₄₅ (VEGF-A ₁₄₅), vascular endothelial growth factor A ₁₆₅
4	(VEGF- A ₁₆₅), vascular endothelial growth factor A ₁₈₉ (VEGF- A ₁₈₉), vascular endothelia
5	growth factor A ₂₀₆ (VEGF- A ₂₀₆), vascular endothelial growth factor B (VEGF-B),
6	vascular endothelial growth factor B ₁₆₇ (VEGF- B ₁₆₇), vascular endothelial growth factor
7	B ₁₆₇ (VEGF-B ₁₈₆), vascular endothelial growth factor C (VEGF-C), vascular endothelial
8	growth factor D (VEOF-D), vascular endothelial growth factor E (VEGF-E), placental
9	growth factor (PIGF), acidic fibroblast growth factor (aFGF), basic fibroblast growth
10	factor (bFGF), or angiopolietin-1 (Ang1).
1	The method of claim 15, wherein the chimeric molecule is a fusion
2	protein wherein the fusion protein comprises an angiogenic factor linked to a targeting
3	molecule that specifically binds to a vascular endothelium.
1	The method of claim 19, wherein the angiogenic factor is vascular
2	endothelial growth factor B, vascular endothelial growth factor B_{167} (VEGF- B_{167}),
	vascular endothelial growth factor B_{186} (VEGF- B_{186}), or vascular endothelial growth
3	
4	factor C (VEGF-C).
1	21. The method of claim 15, wherein the chimeric molecule is
2	suspended or dissolved in a pharmaceutically acceptable carrier.
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1	The method of claim 15, wherein the chimeric molecule is
2	suspended or dissolved in a cell culture medium.
1	The method of claim 15, wherein the pharmaceutical composition
2	is in the form of an injectable solution.

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1	24. A polynucleotide comprising a nucleic acid sequence encoding a
2	fusion protein comprising an angiogenic factor and a targeting molecule, wherein the
3	targeting molecule specifically binds to a vascular endothelium.
1	75. The polynucleotide of claim 24, wherein the nucleic acid sequence
2	is in an expression cassette.
1	26. The polynucleotide of claim 25, wherein the expression cassette is
2	in a retroviral vector or an adenovirus-associated vector.
1	27. A method of inducing angiogenesis in a tissue comprising
2	transfecting an endothelial cell with the nucleic acid of claim 24, whereby the cell
3	expresses a fusion protein encoded by the nucleic acid.
1	28. A pharmaceutical composition comprising the chimeric molecule
2	of claim 1 and a pharmaceutically acceptable carrier.
1	29. A pharmaceutical composition comprising the fusion protein of
2	claim 6.